Claims:

1.   A control device for electrical or electronic equipment, the device having processing means and non-volatile memory means, the non-volatile memory means having installed programs executable by the processing means direct from the non-volatile memory means, each program being made up of processing elements at least one of which can be modified or upgraded by the installation of a patch, characterised in that:

a part of the memory means is used as a patch registry containing a list of patch descriptor elements, and

the processing means is arranged to install a new patch by modifying the program processing element to which it relates and storing a descriptor element for the patch in the patch registry.

2.   A device as claimed in claim 1 in which the patch registry includes information relating to the progress of the installation of a new patch.

3.   A device as claimed in claim 1 or 2 in which the patch registry includes a list of unused program memory blocks for each processor element.

4.   A device as claimed in claim 3 in which, on installation of a new patch, unused program memory in the list is used to extend the patch registry to contain information relating to the new patch.

5.   A device as claimed in any preceding claim in which each patch descriptor element contains a text description of the patch which can be presented to a user interface.

6.   A device as claimed in any preceding claim in which each patch descriptor element contains a list of modified code descriptor elements.

7.   A device as claimed in claim 6 in which the modified code descriptor elements identify the processor element to which the patch has been applied.

8.   A device as claimed in claim 7 in which the modified code descriptor elements identify the start address of a faulty code block in the processor element.

9.   A device as claimed in claim 7 or 8 in which the modified code descriptor elements identify the number of bytes of faulty code in the processor element being repaired by the patch.

10.   A device as claimed in claim 7, 8 or 9 in which the modified code descriptor elements include the start address of the memory area used for the repaired code contained in the patch.

11.   A device as claimed in any claims 7 to 10 in which the modified code descriptor elements contain information in the form of binary flags describing how the repaired code contained in the patch was installed.

12.   A method of modifying programs installed in a control device for electrical or electronic equipment, the control device having processing means and non-volatile memory means, the non-volatile memory means having installed programs executable by the processing means direct from the non-volatile memory means and each program being made up of processing elements, the method comprising:

    a)   downloading to the control device a patch from an external source containing code for modifying a program processing element,

    b)   installing the patch by modifying the program processing element to which it relates in the non-volatile memory; and

    c)   storing a descriptor element for the patch in a separate part of the non-volatile memory designated as patch registry.

13. A method as claimed in claim 12 including, during step b), storing in the patch registry information relating to the progress of the installation of a new patch.

5   14. A method as claimed in claim 12 or 13 additionally comprising the step of storing in the patch registry a list of unused memory blocks for each processor element.

15. A method as claimed in claim 14 in which, on installation of a new patch,
10 the patch registry is extended using unused memory and information relating to the new patch is stored in said unused memory added to the patch registry.

16. A method as claimed in any of claims 12 to 15 including configuring each patch descriptor element to contain a text description of the patch which can be
15 presented to a user interface.

17. A method as claimed in any of claims 12 to 16 including configuring each patch descriptor element to contain a list of modified code descriptor elements.

20 18. A method as claimed in claim 17 in which the modified code descriptor elements are configured to identify the processor element to which the patch has been applied.

19. A method as claimed in claim 17 in which the modified code descriptor
25 elements are configured so as to identify the start address of a code block in the processor element to be modified.

20. A method as claimed in claim 18 or 19 in which the modified code descriptor elements identify the number of bytes of code in the processor element
30 being modified by the patch.

21.   A method as claimed in claim 18, 19 or 20 in which the modified code descriptor elements include the start address of the memory area used for the modified code contained in the patch.

5   22.   A method as claimed in any of claims 18 to 21 in which the modified code descriptor elements contain information in the form of binary flags describing how the repaired code contained in the patch was installed.

23.   A method as claimed in any of claims 12 to 21 in which step (b) comprises

10   overwriting code in a processing element with code contained in the patch.

24.   A method as claimed in any of claims 12 to 21 in which step (b) comprises installing patch code in non-volatile memory space and diverting program flow to this memory space and back again thereby bypassing code in the unmodified

15   processing element.